Matteuccite $NaHSO_4 \cdot H_2O$

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Crystal Data: Monoclinic (synthetic). *Point Group: m.* A massive component of fumarolic stalactites.

Physical Properties: Hardness = n.d. D(meas.) = 2.118 (synthetic). D(calc.) = 2.124

Optical Properties: Semitransparent. Color: Colorless.

Optical Class: Biaxial (-) (synthetic). $\alpha = 1.43$ $\beta = 1.46$ $\gamma = 1.48$ 2V(meas.) = Large.

Cell Data: Space Group: Aa (synthetic). a=8.213 b=7.812 c=7.805 $\beta=120.04^\circ$ Z=4

X-ray Powder Pattern: Synthetic.

3.557 (100), 3.462 (70), 3.422 (55), 5.110 (35), 3.633 (30), 2.759 (20), 3.378 (18)

Chemistry: (1) Identification depended on a single strong X-ray line at 3.47 which was interpreted as representing the two strongest lines of the synthetic compound.

Occurrence: In stalactites formed in a volcanic crater.

Association: Mercallite, ralstonite.

Distribution: From Vesuvius, Campania, Italy.

Name: Honors Vittorio Matteucci (1862–1909), Director of the Vesuvius Laboratory, Vesuvius, Italy.

Type Material: University of Florence, Florence, Italy, 1970/I.

References: (1) Carobbi, G. and C. Cipriani (1952) Ralstonite e bisolfato sodico (matteuccite) fra i prodotti della fumarole vesuviane. Atti Rend. Accad. Lincei, 12, 23–29 (in Italian). (2) (1954) Amer. Mineral., 39, 848 (abs. ref. 1). (3) (1971) NBS Mono. 25, 9, 52.